ABSTRACT OF THE DISCLOSURE

A solid-state image pickup apparatus includes a solid-state image sensor in which photosensitive cells, each consisting of a main and a subregion and including an optical opening, are arranged in a bidimensional array. A system controller adjusts the exposure times of the main and subregions in dependence upon the direction and amount of a sensitivity error in the vertical direction relative to an accurate optical opening. A timing signal generator feeds a timing signal to a driver in response to a control signal output from the system controller. The driver feeds, in response to the timing signal and a control signal also output from the system controller, the image sensor with a drive signal relating to the opening/closing of a mechanical shutter, thereby causing the above exposure times to end at the same time. Therefore, signal charges output from the main and subregions are free from errors.